

REDACTED
Docket No. 20000-____-ER-11
Witness: Cindy A. Crane

BEFORE THE WYOMING PUBLIC SERVICE
COMMISSION

ROCKY MOUNTAIN POWER

REDACTED Direct Testimony of Cindy A. Crane

December 2011

1 **Q. Please state your name, business address and present position with PacifiCorp**
2 **(“the Company”).**

3 A. My name is Cindy A. Crane. My business address is 1407 West North Temple, Suite
4 310, Salt Lake City, Utah 84116. My position is Vice President, Interwest Mining
5 Company and Fuel Resources for PacifiCorp Energy.

6 **Qualifications**

7 **Q. Briefly describe your business experience.**

8 A. I joined PacifiCorp in 1990 and have held positions of increasing responsibility,
9 including Director of Business Systems Integration, Managing Director of Business
10 Planning and Strategic Analysis and Vice President of Strategy and Division
11 Services. My responsibilities have included the management and development of
12 PacifiCorp’s ten-year business plan, assessing individual business strategies for
13 PacifiCorp Energy, managing the construction of the Company’s Wyoming wind
14 plants and assessing the feasibility of a nuclear power plant. In March 2009, I was
15 appointed to my present position as Vice President of Interwest Mining Company and
16 Fuel Resources. In my position I am responsible for the operations of Energy West
17 Mining Company and Bridger Coal Company as well as overall coal supply
18 acquisition and fuel management for PacifiCorp’s coal plants.

19 **Purpose and Summary**

20 **Q. What is the purpose of your testimony?**

21 A. I explain the Company’s overall approach to providing the coal supply for the
22 Company’s coal plants and support for the level of coal costs included in fuel expense
23 in this case. Several of the Company’s very favorably priced long-term coal purchase

1 agreements terminate in 2011 and have been replaced with new agreements at
2 prevailing market prices or contain market reopener provisions that allow resetting of
3 the contract price. As these contracts expire they must be renegotiated and replaced at
4 prices reflective of the current market.

5 **Q. Please summarize your testimony.**

6 A. My testimony:

- 7 • Explains the primary causes of the \$58.4 million price related coal cost increase
8 reflected in the Wyoming general rate case for the 12 month period ending March
9 2013;
- 10 • Provides background on the third-party coal contract revisions that are driving the
11 majority of the coal cost price increase in this case;
- 12 • Reviews the Company's affiliate mine coal costs and compares them to other
13 supply alternatives;
- 14 • Demonstrates that Wyoming customers benefit from the Company's diversified
15 coal supply strategy;
- 16 • Reviews the acquisition of the Cottonwood coal lease tract and supports inclusion
17 in Plant Held for Future Use; and
- 18 • Discusses the increasing sulfur content of the Company's Utah coal supplies.

19 **Overview of the Coal Supplies for the Company's Coal Plants**

20 **Q. How does the Company plan to meet fuel supplies for its coal plants during the**
21 **April 2012 through March 2013 test period?**

22 A. As reflected in Table 1 below, the Company employs a diversified coal supply
23 strategy. The Company will supply approximately 66.7 percent of its coal

1 requirements from third-party multi-year contracts and 33.3 percent with coal from
 2 the Company's affiliate mines. Approximately 31.3 percent of the Company's total
 3 coal requirements are supplied under fixed-price contracts and 35.5 percent is
 4 supplied under contracts that escalate or de-escalate based on changes to producer and
 5 consumer price indices.

Table 1: Coal Sourcing

	Plant	New Contract	Price Reopener	MMBtu's (000's)	MMBtu's (000's)	
Captive Mines						
Bridger Coal Company/Bridger	Bridger			72,543		
Eney West/Deer Creek	Utah			69,914		
Trapper Mining Inc/Trapper	Craig			9,287		
Subtotal Captive Mines					151,745	33.3%
Fixed Price Contracts						
Rhino Energy/Castle Valley	Utah	√		7,080		
America West Resources/Horizon	Utah			4,607		
Arch/Sufco	Utah			54,919		
Utah American Energy/West Ridge	Utah			20,711		
Arch/Coal Creek	Dave Johnston	√		10,020		
Western Fuels/Dry Fork	Dave Johnston	√		21,600		
Peabody/Rawhide	Dave Johnston			23,655		
Subtotal Fixed Price Contracts					142,592	31.3%
Escalating Contracts						
Amber Energy/Black Butte	Bridger			30,861		
Peabody/Lee Ranch	Cholla			28,246		
Westmoreland/Rosebud	Colstrip			11,922		
Rio Tinto/Colowyo	Craig		√	4,201		
Peabody/Twenty mile	Hayden	√		6,224		
Chevron Mining/Kemmerer	Naughton		√	55,950		
Black Hills/Wyodak	Wyodak			24,518		
Subtotal Escalating Contracts					161,922	35.5%
Total Coal Supplies					456,259	100%

6 **Q. Please explain how the Company's Utah plants are supplied with coal.**

7 A. The Utah plants are sourced collectively through a diversified portfolio of coal
 8 supplies. While the Deer Creek mine supplies primarily the Huntington plant and a
 9 portion of the Hunter plant, the contract coal supplies are typically interchangeable
 10 between the plants. The contract coal supplies are blended to be consistent with plant

1 quality specifications in order to maximize generation. Blended coal combinations are
2 optimized to minimize transportation costs.

3 **Coal Cost Increases in the April 2012 – March 2013 Test Period**

4 **Q. Do coal costs in this case reflect an increase above cost levels in the 2010 general**
5 **rate case (a 2011 calendar year test period)?**

6 A. Yes. As discussed in the testimony of Company witness Mr. Gregory N. Duvall, test
7 period coal costs have increased on a total company basis from \$690.4 million in the
8 2011 calendar year test period to \$764.1 million for the current case, an increase of
9 \$73.7 million. The increase related to higher coal prices is approximately \$58.4
10 million; the increase related to increased coal-fired generation is approximately \$15.3
11 million and is addressed in the testimony of Mr. Duvall. Average coal costs have
12 increased from \$29.84 per ton in the prior rate case to \$32.83 per ton for the test
13 period ending March 2013, an increase of \$2.99 per ton.

14 **Q. What are the primary drivers of the \$58.4 million increase in coal prices?**

15 A. Approximately \$16.3 million of the cost increase is associated with the affiliate
16 mines; the remainder of the increase, \$42.1 million, is associated with third party coal
17 purchases and transportation costs.

18 **Affiliate Mine Costs**

19 **Q. Please explain the increase associated with the affiliate mines.**

20 A. Deer Creek mine production costs have increased from [REDACTED] per ton to [REDACTED] per
21 ton, an increase of [REDACTED] per ton. Bridger mine costs have increased from [REDACTED] per
22 ton to [REDACTED] per ton, an increase of [REDACTED] per ton, and Trapper mine costs have
23 increased slightly from [REDACTED] to [REDACTED] per ton, or [REDACTED] per ton. These changes

1 result in the following increases:

Table 2: Captive Mine Cost Increase


	Millions (\$)
Captive Mines	
Bridger Coal Company	
Deer Creek	
Trapper	
Total Captive Cost Increase	\$ <u>16.3</u>

2 **Third-Party Coal Costs**

3 **Q. Please identify the major aspects of the \$42.1 million increase in third-party coal**
 4 **supplies.**

5 A. During this test period, the Company expects third-party coal supply cost increases at
 6 all of the plants with the exception of Colstrip. The breakdown is as follows:

Table 3: Contract Price Increases

Plant	Contract	Millions (\$)
Utah	Skyline Mine Contract Replacement	\$ 
Utah	Sufco Coal Cost Increase	
Utah	West Ridge Coal Cost Increase	
Naughton	Kemmerer Mine Price Increase	
Bridger	Black Butte Rail and Coal Cost Increase	
Dave Johnston	Wyodak Contract Replacement	
Dave Johnston	Dry Fork and Rawhide Price Increases	
Dave Johnston	BNSF Rail Rate Increase	
Wyodak	Wyodak Contract Price Increase	
Hayden	Peabody Contract Replacement	
Cholla	Lee Ranch Rail and Coal Cost Increase	
Craig	Colowyo Coal Cost Increase	
Other		
Total Contract Cost Increases		

1 **Coal Supply Agreements for the Utah Plants**

2 **Q Please describe the Skyline coal transaction for the Carbon plant.**

3 A. In the prior test period, the Carbon plant was supplied, in part, with 300,000 tons of
4 coal from the Skyline mine that was deferred from 2009. During 2008, the Company
5 and Arch agreed to defer 300,000 tons of the Company's 2009 contract tonnage under
6 the long-term Sufco coal supply agreement until 2011. Arch also agreed to supply the
7 coal from their Skyline mine, a substitute source for Sufco. In addition to supplying
8 the Skyline tonnage at the 2009 Sufco contract price, the Company required Arch to
9 discount the Skyline coal price by [REDACTED] per ton as an inducement for agreeing to the
10 2009 tonnage deferral. With the expiration of this supply transaction in December
11 2011, the Company entered into negotiations with Rhino Energy, the operator of the
12 Castle Valley mine, for a new long-term coal supply agreement as well as increased
13 volumes under the Company's long-term agreement with the West Ridge mine.
14 Replacement of the Skyline coal supply will increase test period costs by [REDACTED]
15 million.

16 **Q. Please explain the cost increase under the Sufco contract.**

17 A. The majority of the Hunter and a portion of the Huntington power plant requirements
18 are supplied by the Sufco mine under the Company's long-term coal supply
19 agreement with Arch Coal Sales. In June 2011, the Company and Arch reached
20 agreement on the contract price that was retroactively effective to January 2011.
21 Additionally, the contract provides for annual escalation of the contract price tied to
22 inflationary factors and the make-up of prior year contract tonnage shortfall. The
23 delivered price of coal from the Sufco mine to the Hunter and Huntington plants has

1 increased from [REDACTED] per ton in the prior test period to [REDACTED] per ton in the current
2 test period, an increase of approximately [REDACTED] million.

3 **Q. Please explain the [REDACTED] million cost increase under the West Ridge agreement.**

4 A. A portion of both the Carbon and Hunter plant requirements is supplied by the West
5 Ridge mine under a long-term fixed price coal supply agreement that expires in
6 December 2014. The approximately [REDACTED] million increase in coal costs reflects both
7 an increase in delivered costs from [REDACTED] per ton in the prior test period to [REDACTED]
8 per ton in the current test period and an increase in contract tonnage from
9 approximately 600,000 tons in the prior test period to 1 million tons in the current test
10 period.

11 **Coal Supply Agreements for the Wyoming Plants**

12 **Q. Please describe the increase relating to the Naughton contract.**

13 A. The Naughton power plant is supplied under a long-term coal supply agreement with
14 Chevron Mining's Kemmerer mine. Test period costs will increase from [REDACTED] per
15 ton in the prior case to [REDACTED] per ton for the 12 months ending March 2013, an
16 increase of a [REDACTED] per ton. The contract price adjusts with changes in contract
17 specific producer and consumer price indices as well as production taxes and
18 royalties. As part of the September 2010 contract renegotiation, the parties agreed to
19 several price resets over the term of the agreement with the first price reset occurring
20 January 2013. This price reset adjusts the contract price to [REDACTED]
21 [REDACTED]. Of the overall [REDACTED] million increase, [REDACTED] million is
22 attributable to the January 2013 price reset; the remainder is attributable to escalation
23 of the contract specific producer and consumer price indices and changes in third

1 party costs.

2 **Q. Please explain the [REDACTED] million increase in Black Butte costs.**

3 A. Almost one-third of the Bridger plant coal requirements are supplied by the Black
4 Butte mine. The delivered cost of Black Butte coal to the Jim Bridger power plant has
5 increased to [REDACTED] per ton from the 2011 price of [REDACTED] per ton, an increase of
6 [REDACTED] per ton. Higher rail costs account for [REDACTED] per ton of the increase; the
7 remaining [REDACTED] per ton is associated with higher F.O.B. mine costs. Coal costs adjust
8 monthly based on changes to contract specific producer and consumer price increases
9 as well as Wyoming production taxes and royalties; Union Pacific rail rates are
10 adjusted quarterly based on the changes to the All-Inclusive Index less Fuel published
11 by the Association of American Railroads.

12 **Q. Please explain the [REDACTED] million increase in Dave Johnston power plant coal
13 supply costs.**

14 A. Approximately 45 percent of the Dave Johnston plant coal requirements are supplied
15 by Wyodak Resources Development Corporation, a subsidiary of Black Hills. In
16 October 2007, the Company entered into a long-term coal supply agreement with
17 Wyodak Resources for coal from the Wyodak mine. The term of the Wyodak coal
18 agreement extended through December 2011. During the spring of 2011, the
19 Company released a solicitation for Powder River Basin coal supplies for the Dave
20 Johnston power plant. Based on the results of the coal solicitation, the Company
21 entered into new coal supply agreements with Arch and Western Fuels for coal
22 supplies from the Coal Creek and Dry Fork mines.

1 **Q. How much of the increase at the Dave Johnston plant is associated with the new**
2 **coal supplies?**

3 A. Approximately [REDACTED] million of the [REDACTED] million test period increase is associated with
4 the higher coal prices in the new coal supply arrangements.

5 **Q. Has the Dave Johnston plant rail rate changed from the prior case?**

6 A. Yes. Coal is transported to the Dave Johnston plant under a long term rail agreement
7 with the BNSF Railway Company. Rail rates are adjusted quarterly based on the
8 changes to the unadjusted Rail Cost Adjustment Factor published by the Association
9 of American Railroads and have increased from [REDACTED] per ton in the prior case to
10 [REDACTED] for the current test period. The increase, approximately [REDACTED] million, is due
11 primarily to higher diesel fuel expense.

12 **Q. Please discuss the causes for the remaining [REDACTED] million increase in Dave**
13 **Johnston fuel costs.**

14 A. In addition to the new Arch and Western Fuels coal supply agreements discussed
15 above, the Dave Johnston plant is also supplied under multi-year agreements with
16 Peabody's Rawhide mine and a separate Western Fuels agreement. These agreements
17 provide annual price increases and account for the remaining [REDACTED] million increase in
18 Dave Johnston fuel costs.

19 **Q. Please explain the [REDACTED] million increase in Wyodak plant costs.**

20 A. The Wyodak plant is entirely supplied by the Wyodak mine under a long-term coal
21 supply agreement through 2022 via an overland conveyor. The average mine price of
22 Wyodak coal has increased to [REDACTED] per ton from the 2011 price of [REDACTED] per ton,
23 an increase of [REDACTED] per ton. Coal costs adjust monthly based on changes to contract

1 specific producer and consumer price increases as well as Wyoming production taxes
2 and royalties.

3 **Coal Supply Agreements for the Joint Owned Plants**

4 **Q. Please discuss the Hayden plant coal supply.**

5 A. The current coal supply agreement was negotiated in December 2005 and terminates
6 in December 2011. The Hayden plant owners attempted to negotiate an extension to
7 the current coal supply agreement with Peabody during 2010. Peabody was unwilling
8 to extend the Twentymile agreement under similar terms and conditions; Xcel, the
9 plant operator and on behalf of the other Hayden plant participants, issued a request
10 for proposal for new coal supplies for the 2012 through 2014 timeframe.

11 **Q. Which coal production basins were targeted with the coal solicitation?**

12 A. Xcel received multi-year proposals from Powder River Basin coal suppliers as well as
13 suppliers in the Green River and Uinta Basin in Colorado. Based on the results of the
14 solicitation, the Hayden plant owners negotiated a new coal supply agreement with
15 Peabody. The test period reflects the recently negotiated coal price with Peabody as
16 well as the Union Pacific Railroad's cost to transport the Twentymile coal by rail.

17 **Q. Has the Hayden plant's coal cost changed from the prior test period?**

18 A. Yes, the increase above the prior test period is approximately [REDACTED] million.
19 Approximately [REDACTED] million of the [REDACTED] million increase in Hayden plant cost is
20 associated with the new coal supply agreement and the remaining [REDACTED] million
21 reflects increased transportation costs.

22 **Q. Please explain the [REDACTED] million increase in Cholla plant costs.**

23 A. The Cholla plant is supplied under a long-term coal supply agreement with Peabody's

1 Lee Ranch/El Segundo mine complex and transported by the BNSF Railway.
2 Contract prices under both agreements adjust quarterly; the coal contract adjusts to
3 changes in contract specific producer and consumer price indices while the rail
4 agreement adjusts based on changes to the Railroad Cost Recovery Factor published
5 by the Association of American Railroads and diesel fuel prices. Test period costs
6 have increased from [REDACTED] per ton to [REDACTED] per ton in the current period; higher rail
7 costs account for [REDACTED] per ton of the increase; the remaining [REDACTED] per ton is
8 associated with higher mine costs.

9 **Q. Please explain the [REDACTED] million increase in Colowyo test period costs.**

10 A. The long-term contract with Colowyo adjusts semi-annually based on changes to
11 contract specific producer and consumer price indices. Colowyo contract costs have
12 increased from [REDACTED] per ton in the prior test period to [REDACTED] per ton in the current
13 test period, an increase of [REDACTED] per ton. Approximately [REDACTED] per ton of the increase
14 is associated with the most recent Colowyo price reopener.

15 **Q. Please explain the Colowyo price reopener?**

16 A. The long-term coal supply agreement with Rio Tinto's Colowyo mine provides for
17 resetting of the contract price to market subject to a [REDACTED] increase price cap
18 every five years. The market price determination is based upon the delivered cost of
19 spot coal to coal plants located in Colorado.

20 **Q. When was the coal price last reset?**

21 A. The price was last reset July 1, 2011, and Colowyo received the maximum price
22 increase of [REDACTED] per ton.

1 **Captive Mine Costs**

2 **Q. Please describe the change in Bridger Coal costs.**

3 A. Bridger Coal costs have increased by approximately [REDACTED] million over the prior test
4 period. Bridger Coal test period costs have increased from [REDACTED] per ton to [REDACTED]
5 per ton, an increase of [REDACTED] per ton or [REDACTED] million in higher production costs.
6 Reduced Bridger Coal heat content resulted in an additional [REDACTED] million increase.

7 **Q. Have production costs for both the surface and underground mines changed?**

8 A. Yes, test period surface costs have increased from [REDACTED] per ton to [REDACTED] per ton, a
9 [REDACTED] per ton increase and underground mine costs have increased from [REDACTED] per
10 ton to [REDACTED] per ton, a [REDACTED] per ton increase.

11 **Q. Have Bridger Coal's production levels changed?**

12 A. Yes. Deliveries from the surface mine decreased from 1,652,837 tons in the prior case
13 to 1,269,785 tons, a reduction of 383,052 tons; however, underground mine deliveries
14 have increased from 4,041,848 to 4,772,215 tons, an increase of 730,367 tons.

15 **Q. Do the Bridger surface and underground function as separate operations?**

16 A. No. Bridger Coal Company is an integrated mine complex. Mine assets and mine
17 administration personnel support both operations. Though the majority of the Bridger
18 plant requirements are supplied by the underground mine; the surface mine provides
19 the operational flexibility and blend coal necessary to meet specific Bridger plant coal
20 quality criteria. Mine plans are developed on a monthly basis to ensure that the
21 delivered coal product to the Bridger plant meets specific coal quality criteria. On a
22 daily basis, surface operation and deliveries are adjusted to meet specification.

1 **Q. If Bridger underground mine deliveries are increasing what is causing Bridger**
2 **underground mine costs to increase by [REDACTED] per ton over the prior test period?**

3 A. The increase in underground mine costs is due primarily to a higher unit cost of coal
4 in inventory at the beginning of the current test period. On a monthly basis the
5 production costs associated with that month's underground production is added to the
6 current underground inventory to derive the average unit cost of coal. Underground
7 coal deliveries to the plant are made at the average cost of coal in inventory. The
8 current test period beginning unit cost is based on Bridger underground's actual
9 mining costs and known geological conditions. The impact of the higher beginning
10 inventory valuation results in an approximate [REDACTED] per ton increase over the prior test
11 period.

12 **Q. Please explain Bridger Coal's reduced heat content.**

13 A. During the 2011 test period, the heat content of the coal deliveries from the
14 underground mine was projected to average 9,371 british thermal units per pound
15 (btu/lb). The heat content in the current test period is forecasted at 9,240 btu/lb. The
16 approximately 131 btu/lb decrease in heat content is the result of increased ash
17 content in the coal stream. Increased out-of-seam dilution associated with the current
18 sandstone roof has caused the ash content to increase from 11.46 percent in the prior
19 period to 12.73 percent in the current test period.

20 **Q. How do Bridger Coal mine costs compare to the Company's other supply**
21 **options?**

22 A. Though test period delivered costs of Bridger Coal and Black Butte are similar,
23 [REDACTED] per ton versus [REDACTED] per ton, the Black Butte mine has no additional

1 production capacity. The Company was forced to purchase approximately 150,000
2 tons of Black Butte coal from the Valmy plant owners to supplement the current year
3 coal supply at a delivered cost into the Bridger plant in excess of [REDACTED] per ton.

4 **Q. Please describe the \$7.6 million increase for Deer Creek production costs.**

5 A. Deer Creek costs are projected to increase from [REDACTED] per ton in the prior case to
6 [REDACTED] per ton for the 12 months ending March 2013, an increase of [REDACTED] per ton or
7 approximately [REDACTED] million. An increase in Deer Creek's heat content from 11,042
8 btu/lb in the prior case to 11,376 btu/lb for the 12 months ending March 2013 reduces
9 the overall Deer Creek cost increase by [REDACTED] million. There are three primary drivers
10 for the Deer Creek cost increase: (1) reduced coal production; (2) increased material
11 and supply costs; and (3) increased longwall set-up costs. Deer Creek's coal
12 production is projected to be approximately 300,000 tons less in the current test
13 period; the lower production accounts for approximately [REDACTED] per ton of the [REDACTED]
14 per ton increase. Materials and supply costs have increased from [REDACTED] per ton in the
15 prior case to [REDACTED] per ton in the current test period, a [REDACTED] per ton increase. The rise
16 is primarily due to increased unit costs and higher usage of operating supplies for roof
17 support and adverse geological conditions associated with elevated levels of ash and
18 sulfur. Finally, due to an additional longwall move in the current test period and
19 lower coal recovery from the longwall panels, the longwall set-up cost per ton will
20 increase to [REDACTED] per ton, a [REDACTED] per ton increase over the prior test period.

21 **Q. How do Deer Creek mine costs compare to the Company's other Utah supplies?**

22 A. The Deer Creek mine represents the lowest cost Company coal supply in Utah. Deer
23 Creek costs are more than [REDACTED] per ton less than the delivered cost of Castle Valley

1 and Sufco coals into the Huntington power plant.

2 **Q. Have Trapper mine costs changed from the prior test period?**

3 **A.** Trapper mine costs have increased slightly from [REDACTED] per ton in the previous test
4 period to [REDACTED] per ton in the current test period, an increase of [REDACTED] per ton or [REDACTED]
5 million. The current test period includes approximately [REDACTED] per ton for evaluation
6 of the Williams Fork Mountain coal lease tracts. These unleased coal tracts are
7 located adjacent to the current Trapper operations and represent a potential supply
8 source for the Craig plant after depletion of the current economically recoverable
9 reserves.

10 **Q. How does the Company's Trapper mine compare to other alternatives?**

11 **A.** Favorably. Trapper's test period cost of [REDACTED] per ton, delivered to the Craig plant, is
12 considerably less than the Company's other Colorado coal supplies. The price is over
13 [REDACTED] per ton less than the [REDACTED] delivered price of Colowyo coal to the Craig plant
14 and approximately [REDACTED] per ton less than the delivered coal price of Twentymile
15 coal to the Hayden plant.

16 **Q. Please summarize the benefits of the Company's coal supply strategy.**

17 **A.** Customers have significantly benefited from the Company's diversified fueling
18 strategy. Test period costs demonstrate the benefits of the Company's balanced
19 fueling strategy. The Company has pursued a diversified coal supply strategy, relying
20 on fixed contracts, indexed contracts and affiliate-owned coal mines to meet the fuel
21 needs of its coal fired power plants. While coal costs have increased in this case as a
22 result of contract terminations and reopeners, the company's strategy has resulted in a
23 long-term, stable and low-cost supply of coal for its customers.

1 **Cottonwood Lease Acquisition**

2 **Q. How did the Company subsidiary, Fossil Rock Fuels, LLC, acquire the**
3 **Cottonwood coal lease tract?**

4 A. The Company filed a complaint against Arch in November 2010 claiming
5 anticipatory breach of the 1999 Coal Supply Agreement with respect to pricing,
6 quality and quantity provisions of the agreement. As part of the settlement reached in
7 June 2011, Arch Coal agreed to transfer ownership and control of the Cottonwood
8 leases to a PacifiCorp subsidiary, Fossil Rock Fuels, LLC, for \$20.02 million. Fossil
9 Rock Fuels, LLC in turn assumed a \$5.006 million payment obligation to the State of
10 Utah Schools and Institutional Trust Lands Administration (SITLA) in January 2012.
11 This payment constitutes the final and fifth bonus bid payment associated with Arch's
12 Cottonwood lease acquisition.

13 **Q. Is the Company including the Cottonwood leases in the test period rate base?**

14 A. Yes, the Company's test period includes \$27.0 million in Plant Held for Future Use;
15 \$25.0 million is associated with the actual Cottonwood leases and \$2.0 million is
16 associated with permitting, drilling, facility design and advanced royalties associated
17 with the Cottonwood leases.

18 **Q. Did the Company previously attempt to acquire the Cottonwood leases?**

19 A. Yes. The Company previously attempted to acquire the coal leases in December 2007
20 during SITLA's lease auction; however, the Company was outbid by Arch Coal
21 subsidiary Ark Land Company. Ark Land Company subsequently entered into lease
22 agreements with SITLA in January 2008.

1 **Q. How much did Arch pay for the Cottonwood leases?**

2 A. Arch acquired the rights to the Cottonwood lease tracts for \$25.032 million.
3 Essentially, PacifiCorp acquired the Cottonwood leases from Arch for the same price
4 Arch acquired the leases for in January 2008.

5 **Q. Where are the Cottonwood leases located?**

6 A. The Cottonwood coal leases are located adjacent to the Company's existing, but
7 inactive Trail Mountain federal coal leases in Utah and are estimated to contain over
8 48 million tons of economically recoverable reserves.

9 **Q. Were the Cottonwood leases previously drilled to determine reserve potential
10 and quality?**

11 A. Yes. The Company conducted a surface coal exploration program of the Cottonwood
12 leases during a two-year period, 1990 to 1991. The drill sites were strategically
13 positioned to prove the reserve base potential and coal quality characteristics. The
14 Company drilled seven drill holes, of which five were cored for coal quality.
15 Additionally, ARCO Coal Company, the original lessee of the Trail Mountain federal
16 coal leases completed seven other drill holes.

17 **Q. Why are the Cottonwood reserves strategic for the Company?**

18 A. The leases could be mined as a replacement for the current Deer Creek mine which is
19 projected to be depleted between 2017 and 2021, as a replacement to the current West
20 Ridge coal supply agreement expiring in 2014 and/or in lieu of Sufco coal during the
21 second extension period, 2016-2020.

22 **Q. What are the benefits of the Cottonwood reserves for customers?**

23 A. The Cottonwood reserves represent one of the two largest coal resources yet to be

1 mined in Utah. Without rail access, the Company's Utah plants are solely dependent
2 upon locally produced coals. The Cottonwood reserves allow the Company to lower
3 coal costs and postpone/potentially avoid development of the rail infrastructure
4 required to import coal from another production basin and any plant modifications
5 necessary to retrofit the Hunter and Huntington plants to consume coal produced from
6 production basins outside Utah.

7 **Q. Has the Company estimated the savings of acquiring and mining of the**
8 **Cottonwood coal leases versus purchasing external coal?**

9 A. Yes, the Company performed its mine planning and economic analysis of the
10 Cottonwood reserves assuming the reserves replace third party coals and the Deer
11 Creek supply upon depletion. This analysis showed significant savings for customers
12 and warranted the Company's acquisition of the leases from Arch.

13 **Utah Coal Supplies – Increasing Sulfur Content**

14 **Q. Is the sulfur content of the Hunter and Huntington plant coal supplies**
15 **increasing?**

16 A. Yes. The Company is experiencing an increase in sulfur content in coal delivered to
17 the Hunter and Huntington plants. The increase in sulfur content is due primarily to
18 the replacement of the Dugout coal supply with West Ridge mine coal and an
19 increase in the sulfur content of Deer Creek coal.

20 **Q. Please discuss the Company's contract for West Ridge mine coal with Utah**
21 **American Energy Inc.**

22 A. In December 2010, the Company executed a coal supply agreement with Utah
23 American Energy for coal from the West Ridge mine for 2011 through 2014. West

1 Ridge mine’s high ash fusion temperature mitigates the low ash fusion characteristics
2 of Arch’s Sufco coal that causes boiler slagging at Hunter and its high sulfur content
3 improves precipitator performance at the Carbon plant. The contract established
4 500,000 tons as the annual contract minimum in 2011 and 1.0 million tons as the
5 contract minimum for 2012 through 2014.

6 **Q. What other Utah mines produce high ash fusion temperature coal?**

7 A. Arch Coal’s Dugout mine is the only other active longwall operation in Utah that
8 produces high ash fusion temperature coal.

9 **Q. Did the Company previously have a coal supply agreement for Dugout coal?**

10 A. Yes. During 2008 though 2010, Arch supplied the Company annually with over a 1.0
11 million tons of Dugout coal. Per the Electric Lake settlement, Arch was required to
12 supply 250,000 tons of Dugout coal; per the Company’s long-term Arch coal supply
13 agreement, Arch was also obligated to supply the Company with at least 750,000 tons
14 of Dugout coal annually as substitute coal for Sufco.

15 **Q. Is Arch still required to supply Dugout coal?**

16 A. No. Arch’s contractual requirement to supply Dugout coal as substitute for Sufco coal
17 expired in December 2010. [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 **Q. How does the “typical” quality specifications for West Ridge coal compare to
22 coal supplied from the Dugout mine?**

23 A. As reflected below, the typical quality specifications for both coals are similar with

1 the exception of ash and sulfur content. The typical sulfur content of the West Ridge
2 coal is [REDACTED] times as much as the Company's previous Dugout supply. This significant
3 increase in sulfur content has resulted in an increase in the use of reagent and
4 chemicals as discussed by Company witness, Mr. Dana M. Ralston.

5 **Typical Quality Specifications**

6 **West Ridge Dugout**

7	Calorific Value	[REDACTED]
8	Moisture	[REDACTED]
9	Percent Sulfur	[REDACTED]
10	Lbs SO ₂ /MMBtu	[REDACTED]
11	Percent Ash	[REDACTED]
12	Ash Softening Temperature	[REDACTED]

13 **Q. Is the sulfur content increasing at the Company's Deer Creek mine?**

14 A. Yes, Deer Creek's sulfur content has increased with the movement of longwall
15 operations in December 2010 from the upper Blind Canyon seam to the lower quality
16 Hiawatha seam.

17 **Q. Has the Deer Creek mine already encountered pocket areas of high sulfur coal in
18 the Hiawatha seam?**

19 A. Yes, during the first quarter of 2011, the Company's Deer Creek mine encountered
20 areas of high ash and high sulfur with the sulfur content at times exceeding one
21 percent. The Company did not previously encounter pockets of high sulfur coal in the
22 Blind Canyon seam.

1 **Q. Will mining continue in high sulfur areas during the test period?**

2 A. Yes, Deer Creek's mine plan reflects that during February 2012 through June 2012,
3 the longwall will again encounter elevated levels of high sulfur coal. The sulfur
4 content is expected to reach as high as 1.4 percent during this period.

5 **Q. Can Deer Creek avoid mining these high sulfur areas?**

6 A. Yes, however, not without significantly increasing Deer Creek's production costs.

7 **Q. Does this conclude your direct testimony?**

8 A. Yes.